ABSTRACT OF THE DISCLOSURE

The present invention relates to a heparin fraction comprising constituents having molecular weights of from about 2,000 to about 4,000 daltons, wherein from about 1% to about 100% of hydroxyl residues of the constituents are oxidized. The present invention also relates to methods of inhibiting angiogenesis and treating an angiogenesis-mediated disorder in a subject by administering a heparin fraction comprising constituents having molecular weights of from about 2,000 to about 30,000 daltons, wherein from about 1% to about 100% of hydroxyl residues of the constituents are oxidized. Another aspect of the present invention relates to compositions including the heparin fractions of the present invention.